

## Welcome to Lewis & Clark County Extension

The Extension Service is a partnership between Lewis & Clark County, Montana State University and the United States Department of Agriculture. This three-way partnership provides educational programs in the areas of Agriculture/Natural Resources, 4-H Youth Development, Community Development and Family and Consumer Sciences. The Lewis & Clark County Extension Office is located on the west side of the Exhibit Hall at the Fairgrounds. This location provides easy access, good parking and a friendly atmosphere for the public.



Janet Cerovski, Catherine McNeil, Brent Sarchet

### 4-H/Youth Development Agent Moves to State 4-H Office

After 3 years as the Lewis & Clark County 4-H/Youth Development Agent, Allison Flynn - Kosto has moved to a new position in the State 4-H Office as the Volunteer and Program Delivery Associate Specialist. As the 4-H/Youth Development Agent in Lewis & Clark County, she made huge strides to increase the number of 4-H delivery methods by working with several afterschool programs, as well as a few classrooms. As a result of afterschool involvement in Lincoln, a new 4-H club was formed in the community, which has been without a 4-H club for three years. Much of her success is due to the introduction of Lego Robotics that has been the key to getting into the schools and has opened the door to other projects such as aerospace, gardening and electricity. Allison promoted 4-H National Science Day by working alongside ExplorationWorks and the Teen Leaders. Lewis and Clark County Extension thanks Allison for her service to the 4-H and Youth Development programs, and wishes her success in her new position.



### Public Provides Input on Extension Programing Efforts

In March the public was invited to assist the Extension Office in Future Program Planning efforts in Lewis & Clark County. The meeting brought people from many different backgrounds and interest together to provide input on the programmatic needs within the county. Topics and discussion areas that were discussed included: gardening/horticulture, family consumer science, community partners, crops, livestock, traditional 4-H, youth development and a "what else" category. The public gave lots of great ideas for all the topic areas. The Extension Office will utilize these ideas as it plans future programing to ensure the needs of the county are being met. Thank you to all the participants.



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# 4-H Youth Development

## 4-H Military Program

Lewis & Clark County 4-H has partnered with Operations Military Kids (OMK), National Guard, YMCA and Helena Public Schools SACC program to provide 4-H opportunities to more than 150 military youth. Through the after school SACC program, military kids were able to learn how to build & program Lego Robots, as well as learn other skills like team work and communication.



Military kids learn how to make bread in a bag.

Partnering with the National Guard, the military youth were able to experience different 4-H projects such as photography. They learned the life skills of public speaking when they had to present their projects to the entire group.

The highlight of the year was Camp PeeWee. The camp was funded by a grant from the Treacy Foundation to provide overnight camp experiences at YMCA Camp Child to kids ages 5-10. The kids gained knowledge about 4-H projects and learned other important life skills.

## Reducing Energy Use and Learning Life Skills

Two local 4-H youth, Shane Mitchell and Logan McNeil, were awarded the prominent EcoStar Award for their work to reduce energy use in the Bill Hamilton 4-H Building on the Lewis & Clark County Fairgrounds. They started the project after identifying a need in their community and developing it into a 4-H Leadership Project. When the building was built about 20



Logan McNeil and Shane Mitchell receiving EcoStar Award.

years ago, it was designed with donated lights which used a lot of energy and had poor illumination. The building is used year around for 4-H activities and users were continually frustrated with poor lighting. The building is owned by the Lewis & Clark County 4-H Council, a non-profit organization who must raise funds for building maintenance.

Shane and Logan worked with local contractors and North Western Energy to identify energy efficient lights, apply for grants and complete the work. An estimated 6,315 kWh was saved as a result of their efforts in energy efficient lights alone, which would result in an estimated \$660 a year in energy savings. They were able to find grants from North Western Energy and Tri-County Green Business Program to cover nearly the entire project. 4-H clubs and groups utilizing the 4-H building can now use this space more effectively because of better illumination throughout the building.

In the spring, the boys were presented with the EcoStar Award by the Lieutenant Governor at the capitol building. A Pollution Prevention Program through MSU Extension, this award recognizes Montana businesses and organizations dedicated to taking environmentally responsible steps to reduce waste, maximize efficiencies, conserve energy and water and improve air quality. Along with learning more about the environmental impacts of energy consumption, the 4-H youth learned many life skills including problem solving, critical thinking, communication, decision making, teamwork and leadership.

## Youth in Depth with Bioscience

A team of youth from Lewis & Clark County were selected to participate in Bioscience Montana during the 2012-2013 school year. This program provides a platform for youth to work directly with researchers at MSU in infectious diseases, metabolism and neuroscience. Youth spent time on MSU's campus, designed and conducted experiments at home, and utilized technology to communicate across the state with others involved in the program. Local youth participating in the program were Elizabeth Carlson, Emma Carlson, Holt Gibson, Christopher Gransbery, Logan McNeil and Katie Merchen along with adult leader, Marca Gibson.



Katie Merchen and Elizabeth Carlson learning about Bioscience

The team selected several projects to work on to further learn about subject areas. The projects the team selected included analyzing bacteria from sharing drinks, studying bacteria in nasal passages of horses and developing an educational video on the importance of omega-3 in our diet. Elizabeth and Emma presented their research to MSU professors at the Montana State Science Fair where they placed second and were awarded a trip to the International Science & Engineering Fair in Phoenix, Arizona.

This program provides a multitude of benefits to the youth participants. The program exposes youth to in-depth science education and possible career fields in science. It exposes youth to a college campus, professors and graduate students to help them be prepared for furthering their education. Youth learn skills that will help them no matter their career choices including disease prevention, healthy choices, goal setting, record keeping, problem solving, critical thinking and teamwork.

## More Youth Introduced to 4-H

During the past year, MSU Extension in Lewis & Clark County continued to strengthen its partnership with the public school system by partnering with six schools in Helena and Lincoln in

various ways. 4-H maintained a strong presence in afterschool programs by providing curriculum and programming in several areas including robotics, electricity, agriculture, gardening and foods & nutrition.

Through these

programming efforts, 128 youth were reached. Most of these schools were 21<sup>st</sup> Century Learning Centers, which are schools with high poverty rates and low performance. 4-H provided opportunities and exposure to topics that many of the youth may not otherwise have access to. All of these programs were offered at no cost. Youth also learned many different skills through participating in the activities such as problem solving, teamwork, goal setting and social skills. Many of the activities provided were related to science, engineering and technology to address a need to engage youth in these topic areas.

The Extension Agent partnered with a fifth grade teacher at Four Georgians Elementary School to provide science programs using robotics in the classroom. By combining resources and providing curriculum, 131 youth in fifth and second grade were reached through this partnership. Students learn skill sets in engineering, computer programming, simple machines, reading and problem solving. This was a natural fit with the school curriculum and provided an interactive, hands-on experience.



Students at Jefferson Elementary School learn about Lego Robotics during an afterschool program.



Former 4-H Extension Agent, Allison Flynn - Kosto teaches youth about Lego Robotics during an afterschool program.

# Agriculture & Natural Resources

## Master Gardener Program - Impacting the Lives of People in Lewis & Clark County



Every spring the Level I Master Gardener class is taught in Helena, and every fall the Level II Master Gardener class is taught. The classes have been taught every year since 2010, and they continue to be well received by the public, often filling up, most of the time with a waiting list. A local flare is added to the course by incorporating local experts who present to the classes. A tour of a local business, nursery, garden, or park is organized with the courses.

Since the spring of 2010, 241 people have taken the Level I course, 61 people have taken the Level II course, and 14 people have taken the Level III course in Bozeman. A survey was sent to all the Master Gardeners in the fall asking for input. When asked what the benefits were of the Master Gardener program in addition to the gardening and horticulture knowledge, 44 percent indicated a social/networking benefit, 27 percent indicated a mental health/stress reduction benefit, and the remaining were evenly split

between financial, professional/career development and physical health benefits.

Master Gardener Program participants indicated that the course has helped make them better gardeners; their yards and gardens are more productive as a result. Some of the comments on the course include:

“I find that taking classes in general, and the Master Gardener Program in particular are a great way for me to focus my time and energy towards a specific goal. The MG program is a great resource for those interested in horticulture and community-based agriculture. I am better off having gone through the program.”

“My garden now flourishes! I have tripled the area in which I grow food and now have confidence I can grow it! We are able to share our abundance with others and that is an incredible joy!”

“I am always looking for the chance to learn something new and to give back to the community. This program allowed me to grow in knowledge and in giving back to the community. I also now have more confidence in working in my yard, developing my soil and garden. Thank you!”

One survey respondent’s comment highlights the impact of overlapping Extension programs.

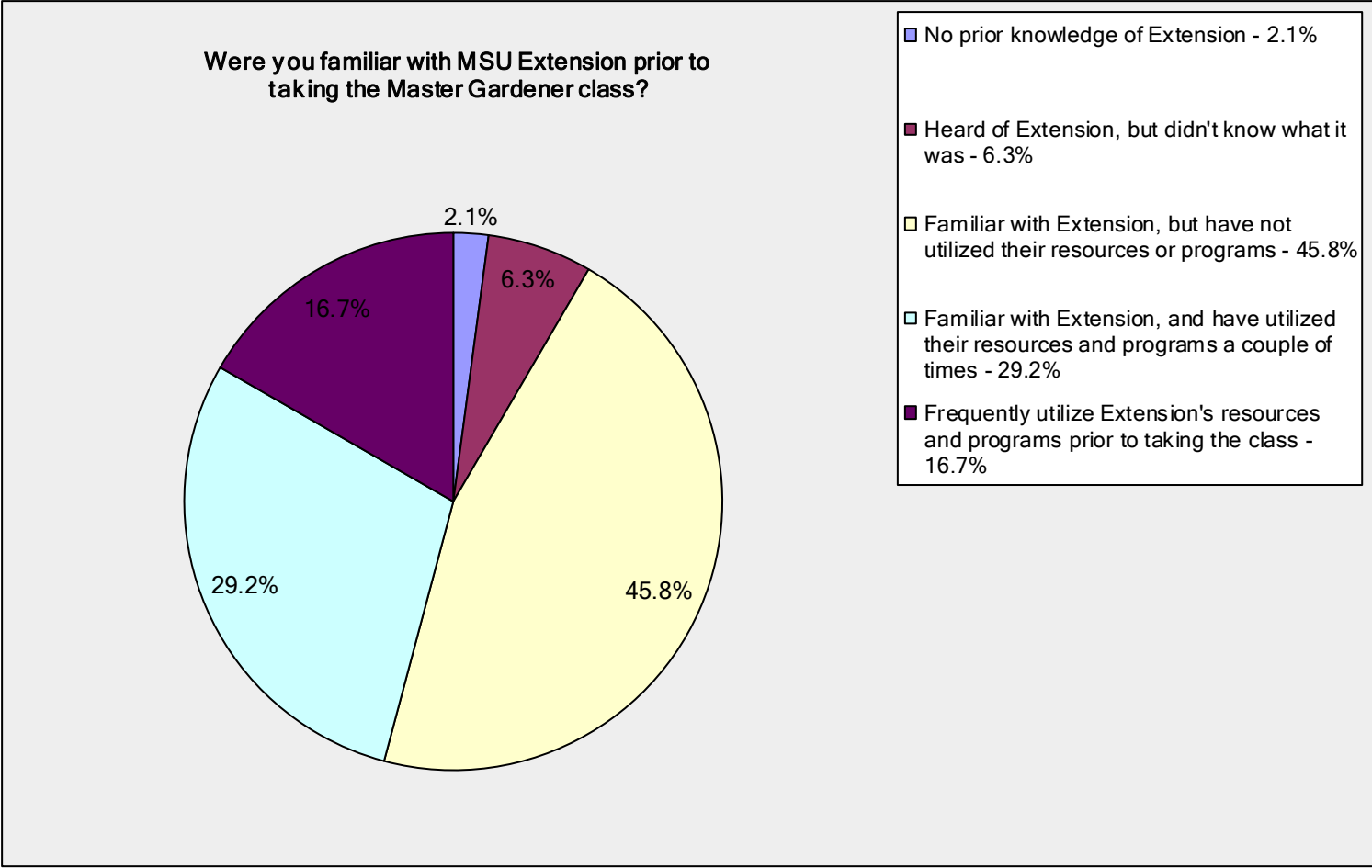
“After participating in the Level I class my husband and I tested our soil and found we needed to apply compost, etc. This has benefited our produce as it is bountiful this year and we always share with the Food Bank Network. We pruned our apple trees the RIGHT way and they are now thriving again. We lived in our home for over 20 years and have never aerated the lawn. Did so this year and then fertilized and wow what a difference. All the information that I was provided and learned has made us more responsible gardeners at home. I also manage an afterschool program for the Helena School District and have had a small gardening program on site at Jefferson School for the past six years. The gardening program is funded through grants and donations. Everything I learned can be passed on to children and families as well as other child care facilities on the importance of “growing locally” and garden-to-table snacks and meals. This program is also important as the 4-H people come into our afterschool program bringing wonderful activities and resources to the children. This past year we did robotics, electricity, gardening and agriculture, as well as wind energy and other sustainable ways to create energy. This program is very, very important to me and the children and families in care so please keep funds coming. Our Extension agent and other staff are an invaluable resource in this community and I cannot even think about not being able to partner with them.” Susan Held, Site Manager Jefferson School Age Child Care.

Examples of financial benefit to participants of the Master Gardener program included: less produce purchased as a result of being able to grow more quality produce, selling produce, selling plants, doing more yard maintenance without hiring it done, saving money by doing their own landscaping, and able to save valuable plants versus having to buy replacements.

“After raising more produce in the garden, I got involved in selling produce at the farmers’ market. I have also raised extra produce to donate to Helena Food Share.”

“I definitely grow more vegetables and pretty much live off my garden, putting away produce for the winter. I also sell produce to a local restaurant.”

The survey also found that prior to taking the Master Gardener class, 77 percent of respondents had not attended a MSU Extension program. That shows that we are introducing many people to Extension through the Master Gardener Program. Without the program, we would not be reaching a large segment of the population we serve. After attending the Master Gardener Program, 47 percent indicated they have attended other Extension programs, and 100 percent said they recommend the Master Gardener Program to other people.



## Master Gardener Volunteers

In order to become a certified Master Gardener there is a volunteer commitment. Master Gardeners work on numerous projects in the community. Some of the projects this year included: gardening education programs in schools, helping build community gardens, working at Food Share, planting trees at community parks, and staffing the Master Gardener booth Saturdays at the Helena Farmers' Market. To date, Master Gardeners have logged over 1,950 volunteer hours; if valued at \$10 per hour that is almost \$20,000 worth of volunteer time that has been put back into the community. Master Gardeners donated over 300 pounds of produce to Helena Food Share just this year.



Level III Master Gardeners Marla Clark and Arnold Sowa at the Master Gardener booth at the Helena Farmers' Market

## Spring Fruit Tree Grafting Workshop

The skill and art of grafting used to be common among gardeners and amateur horticulturalists. The Extension Office is re-establishing this skill among the public through grafting workshops held in the spring. Workshop participants practice the different grafting techniques then get to graft their own fruit tree and take their newly grafted tree home. This skill enables the public to graft their own trees, which in the end can help them save money. But it is also a means of diversifying the fruit trees found in the community, helping to preserve some of these successful, sometimes unknown, cultivars that are found in almost every community.

## What's Wrong With My Plant Workshop

This fall 26 people attended an evening workshop hosted by the Extension Office where people brought pictures and samples of their plants for help in diagnosing what the disease or insects is that's causing the damage. In addition to going over all the samples and pictures, the group took a walk and discussed some of the turfgrass and tree issues at the fairgrounds. This workshop gave people the opportunity to learn about plants and plant issues with visual, hands-on examples. Along with identification of the plant issues, management options were discussed. The educated public can often times manage their own plant problems when given the educational opportunity, which can save them money in the long run by doing their own 'plant healthcare'.



Extension Agent Brent Sarchet with workshop participants outdoors discussing urban tree health

## Poultry Workshop Series

Poultry expert Jim Adkins from the International Center for Poultry came to Helena in March to teach at a three-day poultry workshop series hosted by the Extension office. The first day of the series was dedicated toward successful poultry breeding and incubation. The second day was a NPIP (National Poultry Improvement Plan) testing certification training taught by Dr. Tahnee Syzmanski from the Montana Department of Livestock. Any poultry producers who ship their poultry outside of the state have to have their flock NPIP certified. Until this training opportunity, there had only been a few people across the state who were certified to do the testing. The final day of the series was on how to cook heritage poultry. Margaret Corcoran, owner of Benny's Bistro in Helena taught the hands-on class in the kitchen at the fairgrounds. Cooking heritage, standard-bred poultry requires different techniques than poultry you get at the grocery store, which is mostly Cornish Cross chickens. Workshop participants got the knowledge and resources to help make their small-scale poultry operations more sustainable and successful.

## Two Private Applicator Training (PAT) Workshops Taught This Spring

A five credit training was taught in March in Augusta with 14 participants. Another five credit private applicator training was taught in May in Helena with 40 participants. Private applicators have to accumulate six credits every five years in order to maintain their license. Providing several classes a year enables more applicators to remain current on their credit requirements, and keeps them up-to-date on the latest pesticide information. With assistance from Cecil Tharp, MSU Extension Pesticide Education Specialist, and local Master Gardeners, a series of YouTube recordings have been developed on pesticides in the environment and pesticide safety. The first three completed recordings can be viewed on the county website, <http://www.lccountymt.gov/extension.html>.



County Extension Agent Brent Sarchet instructs on backpack sprayer calibration at the Helena PAT.

## MSU Extension Receives Fruit Tree Cultivar Research Grant

MSU Extension received a grant to conduct fruit tree cultivar research across the state. The project is a collaboration among Extension specialists and agents: Brent Sarchet, Lewis & Clark County Extension Agent and PI on the project; Toby Day, Horticulture Specialist; Pat McGlynn, Flathead County Extension Agent; and Shelly Mills, Valley County Extension Agent. The research project involves testing six apple cultivars, five pear cultivars and three plum cultivars at seven different locations across the state. The orchards that were planted this spring include: Columbia Falls, Power, Helena, Colstrip, Hinsdale and Bozeman. A location in Broadwater County will be planted this fall and then finished next spring. Until recently, with the cherry tree research in Flathead County by Pat McGlynn, Montana State University has not been involved in fruit tree cultivar research since the 1980's. There is a need for fruit tree cultivar research. New cultivars need to be evaluated to determine if they will be successful in the different regions of the state. The objectives of this project are to evaluate the performance of different cultivars at different locations across the state, so that future recommendations can be made based upon the findings for each location. A preliminary publication with the findings of the research will be produced in 2016. Each orchard location will host fruit tree workshops in the future, giving people the opportunity to see first hand how to manage an orchard, and select successful cultivars for their area. The other objective of this project is to establish local fruit production. Fruit is the most limiting component of local food systems across the state with the exception of the Flathead Lake area. Once these orchards are producing, the fruit will be marketed to the local population, providing a local nutritional fruit source. The orchards will be educational resources for people interested in fruit tree production.



Power location before planting, May 1, 2013



Power location after planting, August 26, 2013

## Preservation Workshop Helps Ensure Food is Preserved Safely

On a Saturday in September, 20 people gathered in the kitchen at the Lewis & Clark County Fairgrounds to learn how to use a pressure canner and water bath canner safely and effectively. The workshop was a partnership with the Helena Community Gardens. Participants got hands-on experience canning corn, salsa, and apples. The education the participants gained was important to ensure they preserve food safely. In difficult economic times, and with an increased interest in growing your own food, we have seen an increase in the interest in food preservation. The hands-on experience and reference material gained through the workshop will help families save money on food costs, and enable them to eat safe, nutritious food throughout the year.

The Extension Office tested approximately 15 pressure canner gauges this year. An inaccurate gauge could result in improperly preserved food, which may result in the food causing a food borne illness. This service helps ensure that people have the resources and tools necessary to preserve food safely. The Extension Office has a pressure canner, water bath canner and all the tools used in canning that are available for the public to borrow.



Nori Pearce, MSU/Lake County FCS Extension Agent, instructs on pressure canning and water bath canning.

## Extension Beef Cattle Specialist Comes to Helena

Dr. Rachel Endecott, MSU Extension Beef Cattle Specialist, came to Helena and did a presentation on interpreting and applying forage test results. The Extension agent explained how to take a forage sample. Dr. Endecott then explained what information is on the forage test results and how to apply the results. Especially in drought years and when forage market prices are high, livestock producers have to ensure they are feeding the correct amount of forage. Under-feeding or over-feeding of forage can have significant financial consequences. The presentation helped inform local producers on how to make sure they are feeding enough of their forage to meet the nutritional demands of their livestock while ensuring that they are not over-feeding.

### Contact Us



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